ABSTRACT

This invention relates to matched instruction set processor systems and methods to efficiently design and implement the matched instruction set processor systems. A method to efficiently design and implement a matched instruction set processor system includes analyzing and mapping design specifications of the matched instruction set processor into application components, wherein each application component represents a reusable function commonly used in digital communication systems. The method further includes decomposing the matched instruction set processor system into interconnected design vectors. The method also includes analyzing and mapping the interconnected design vectors into specific hardware and software elements.